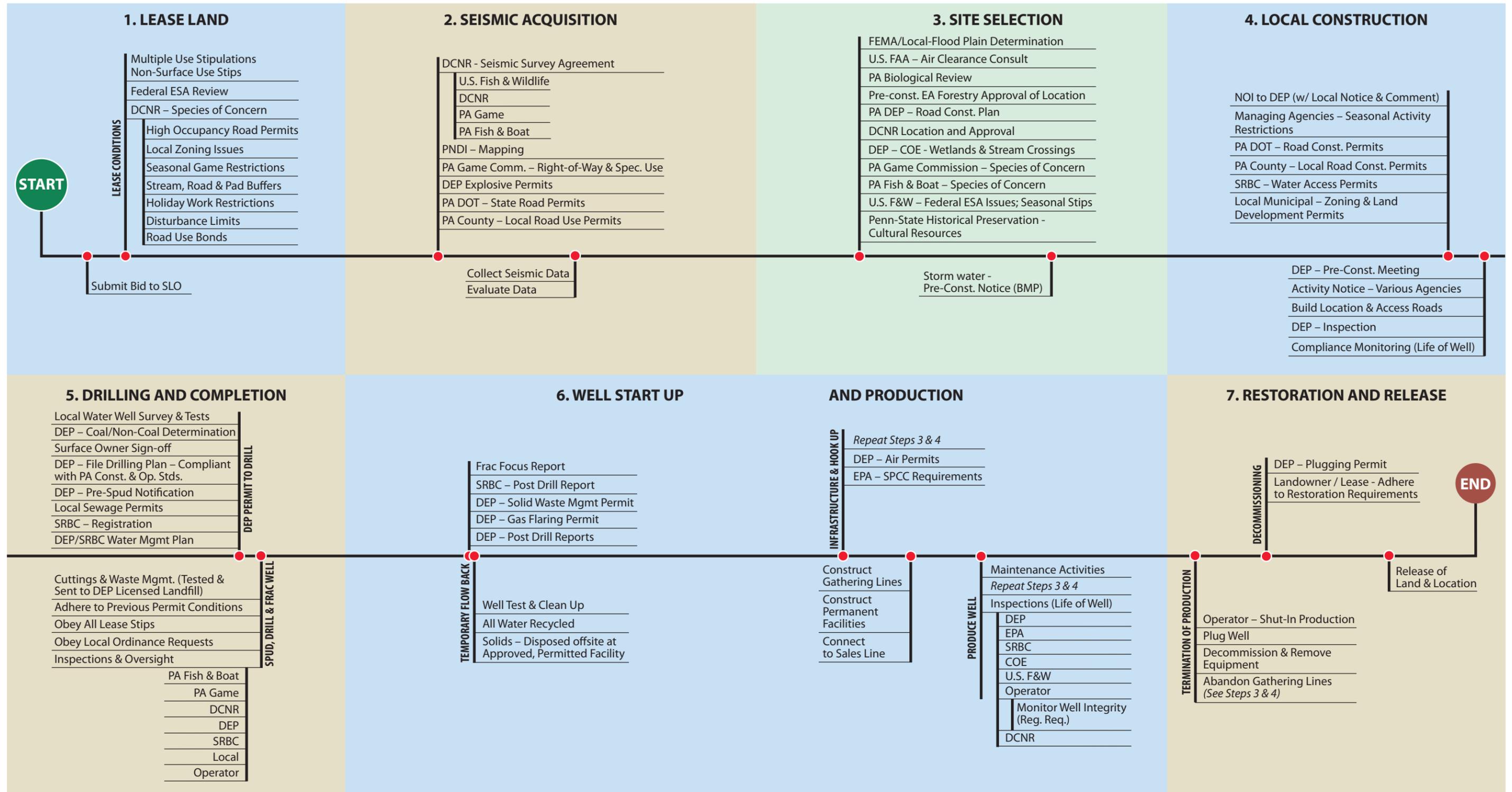


**Figure ES-11.** The Natural Gas and Oil Industry Is Well Regulated: Project Development Requirements in Pennsylvania



**LEGEND:**

**BMP** – Best Management Practice  
**COE** – U.S. Army Corps of Engineers  
**DCNR** – PA Dept. of Conservation & Natural Resources  
**DEP** – PA Dept. of Environmental Protection  
**EA** – Environmental Assessment

**EPA** – Environmental Protection Agency  
**ESA** – Federal Endangered Species Act  
**FAA** – Federal Aviation Administration  
**NOI** – Notice of Intent  
**PA DOT** – PA Dept. of Transportation

**PNDI** – PA Natural Diversity Inventory  
**SLO** – State Lands Office  
**SPCC** – Spill Prevention, Control & Countermeasure Plan  
**SRBC** – Susquehanna River Basin Commission  
**U.S. F&W** – U.S. Fish & Wildlife Service

Source: Adapted from "Governor's Marcellus Shale Advisory, Commission Report" by Jim Cawley, Lt. Governor, Commonwealth of Pennsylvania, July 22, 2011. Full Report Found at <http://www.pa.gov>. Also see Pennsylvania Public Records for Grugan development: Gathering Line - Permit #ESX10-035-0002, GP0518291004, GP0818291001; COP Tract 289 Pad E - Permit #ESX10-081-0076, API #37-081-20446 (Well #E-1029H); COP Tract 285 Pad C - Permit #GP0718291001, ESX10-035-0007. Additional reporting and oversight required for exceptions to permitted activity not shown.